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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,201	02/06/2004	Kyoko Suzuki	09792909-5797	6961
26263	7590	06/27/2006	EXAMINER	
SONNENSCHN NATH & ROSENTHAL LLP			NEGRON, DANIEL L	
P.O. BOX 061080			ART UNIT	
WACKER DRIVE STATION, SEARS TOWER			PAPER NUMBER	
CHICAGO, IL 60606-1080			2627	

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/774,201

Applicant(s)

SUZUKI ET AL.

Examiner

Daniell L. Negrón

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1-16 are objected to because of the following informalities: Examiner cannot readily ascertain from the claim language the definition or value of “n” and “m”. Appropriate correction is required.

In the following rejections of claims 1-16 Examiner interprets “n” and “m” to equal any integer.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishijima et al U.S. Patent No. 6,263,151.

Regarding claim 1, Nishijima et al disclose a magnetic recording head for a helical scan type magnetic recording/reproducing apparatus comprising a multi-gap recording head having “n” gaps (Fig. 1), wherein the gaps are pitched so as to record a pattern of tracks adjacent to one another (see Figs 3 and 4), and a gap for recording the last track among “n” gaps of the multi-gap recording head has a wider gap than other gaps (Fig. 2). Furthermore, in Figure 2, Nishijima et al show standard play video head (3) has as a gap to record the last track among “n” gaps.

Regarding claim 2, Nishijima et al disclose a rotary drum unit (1) for a helical scan type magnetic recording/reproducing apparatus provided with a recording/reproducing head and means for transmitting recording and reproduced signals (see Figs 6 and 9, and disclosure thereof), the recording head is a multi-gap recording head having “n” gaps that are pitched so as to record a pattern of tracks adjacent to one another (see Figs. 3 and 4), and a gap for recording the last track among “n” gaps of the multi-gap recording head has a wider gap than other gaps (Fig. 2). Furthermore, in Figure 2, Nishijima et al show standard play video head (3) has as a gap to record the last track among “n” gaps.

Regarding claim 3, Nishijima et al disclose a rotary drum unit wherein two multi-gap reproducing heads each having “n” gaps are arranged at an angle of 180 degrees to each other (column 5, lines 51-55).

Regarding claim 4, Nishijima et al disclose a rotary drum unit wherein a multi-gap reproducing head having “2n” gaps is arranged at an angle of 180 degrees to the multi-gap recording head (see Fig. 1 and column 5, lines 51-55).

Regarding claims 5 and 6, Nishijima et al disclose a rotary drum unit capable of recording “n” tracks per rotation, wherein two multi-gap reproducing heads each having $(n + m)$ or $(2n + m)$ gaps are mounted (see Fig. 2). Nishijima et al disclose that in either standard play or long play modes of recording/reproducing, there are always two additional heads (i.e., m) being rotated along with the heads being used (i.e., n) during the selected mode.

Regarding claim 7, Nishijima et al disclose a magnetic recording method for a helical scan type magnetic recording/reproducing apparatus, wherein the apparatus includes a multi-gap recording head having “n” gaps that are pitched so as to record a pattern for recording the last

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one of the tracks among “n” gaps of multi-gap recording head has a wider recording gap (Fig. 2). Furthermore, in Figure 2, Nishijima et al show standard play video head (3) has as a gap to record the last track among “n” gaps, the method comprising the steps of recording the tracks by determining a tape running speed such that a minimum recorded track width can be ensured when the multi-gap recording head overwrites after one rotation of recording completed by the gap (column 6, lines 47-67).

Regarding claim 8, Nishijima et al disclose a magnetic recording method in which signals are reproduced by a multi-gap reproducing head having a head width which is $\frac{1}{2}$ of a track width or less (see audio reproducing head in relation to standard play video reproducing head in Fig. 2), wherein two multi-gap reproducing heads each having “n” gaps are arranged at an angle of 180 degrees to each other on a rotary drum (Fig. 1) as the multi-gap head, and the two multi-gap reproducing heads are switched on the rotary drum to transmit reproduced signals therefrom via a rotary transformer having “n” recording channels and “n” reproducing channels (see Figs. 9 and 15 and disclosure thereof).

Regarding claims 9, 13, and 14, claims have limitations similar to those treated in the above rejections, and are met by the references as discussed above.

Regarding claims 10-12, 15, and 16, method claims 10-12, 15, and 16 are drawn to the method of using the corresponding apparatus claimed in claims 1, 2, 5, and 6. Therefore method claims 10-12, 15, and 16 correspond to apparatus claims 1, 5, and 6 and are rejected for the same reasons of anticipation as used above.

Prior Art

Tokuyama U.S. Patent No. 4,490,755 is cited as of interest for disclosure of a helical scan type head wherein gaps are pitched so as to record tracks adjacent to each other and comprising gaps wider than other gaps, similar to Applicant's claimed invention (see for example Figs. 3 and 4).

Yanagawa et al U.S. Patent No. 6,154,332 is cited as of interest for disclosure of a helical scan type magnetic recording/reproducing apparatus wherein tape running speed is controlled in order to record tracks at a predefined track width.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 571-272-7559. The examiner can normally be reached on Monday-Friday (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne R. Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DLN 

June 19, 2006


WAYNE YOUNG
SUPERVISORY PATENT EXAMINER